

Shipping Aug 11/15  
Page 1

Work Order ID 135063

\*135063\*

July 27, 2015 3:53:20 PM

Item ID: D022-661-041

Accept

\*N900040100\*

Setup Start \*NS1\*

Revision ID:

Stop \*NS2\*

Item Name: R22 Bearpaw Wearplates

Start Date: 7/27/2015 Start Qty: 1.00

\*1\*

Cust Item ID:

Required Date: 8/10/2015 Req'd Qty: 1.00

\*1\*

Customer:

Reference:

Approvals: Process Plan: SM Date: 20150727

Run Start \*NR1\*

QC: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop \*NR2\*

| Sequence ID/<br>Work Center ID | Operation<br>Description | Set Up/<br>Run Hours | Tool ID | Tool # | Plan<br>Code | Accept<br>Qty | Reject<br>Qty | Reject<br>Number | Insp.<br>Stamp |
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|

| Draw Nbr | Revision Nbr |    |
|----------|--------------|----|
| DSI 9717 | A            | JA |

|                               |                  |                                                                           |  |  |  |  |  |  |                 |
|-------------------------------|------------------|---------------------------------------------------------------------------|--|--|--|--|--|--|-----------------|
| 100                           | Document Control | 0.00                                                                      |  |  |  |  |  |  | MLJ AUG 11 2015 |
| *100*                         | DOCUMENT CONTROL |                                                                           |  |  |  |  |  |  |                 |
| DC                            | Memo             | 0.00                                                                      |  |  |  |  |  |  |                 |
| Doc.Control -USB or Paperwork |                  | Photocopy bluefile & type labels per PPP D022-661-041/ DSI9717-041 CHG001 |  |  |  |  |  |  |                 |

|           |          |      |  |  |  |  |  |  |                            |
|-----------|----------|------|--|--|--|--|--|--|----------------------------|
| 110       | Pick Kit | 0.00 |  |  |  |  |  |  |                            |
| *110*     |          |      |  |  |  |  |  |  |                            |
| Packaging | Memo     | 0.00 |  |  |  |  |  |  | ① JA JUL 28 2015 DAS 28 39 |
| Packaging |          |      |  |  |  |  |  |  |                            |

|                 |                                         |      |  |  |  |  |  |  |           |
|-----------------|-----------------------------------------|------|--|--|--|--|--|--|-----------|
| 120             | QC4- 100% Inspect kits for completeness | 0.00 |  |  |  |  |  |  |           |
| *120*           |                                         |      |  |  |  |  |  |  |           |
| QC              | Memo                                    | 0.00 |  |  |  |  |  |  | DAS 02 38 |
| Quality Control |                                         |      |  |  |  |  |  |  |           |

AUG 11 2015

DQA: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only ☐

|                                                              |                                                |                                                                                                                                                                                    |                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                 |  |  |                       |  |
|--------------------------------------------------------------|------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|--|--|-----------------------|--|
| Work Order: _____<br><br>Part No. _____<br><br>NCR No. _____ |                                                | <b>DISPOSITION</b><br><br>Rework <input type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/><br>Suspected Unapproved <input type="checkbox"/> |                                                            | <b>AGAINST DEPARTMENT/PROCESS</b><br><br><div style="display: flex; justify-content: space-between;"> <div>             Skid-tube <input type="checkbox"/><br/>             Machining <input type="checkbox"/><br/>             Thermoforming <input type="checkbox"/><br/>             Large Fab <input type="checkbox"/> </div> <div>             Cross tube <input type="checkbox"/><br/>             Small Fab <input type="checkbox"/><br/>             Finishing <input type="checkbox"/><br/>             Composite <input type="checkbox"/> </div> <div>             Water Jet <input type="checkbox"/><br/>             Prod. Eng. Coord. <input type="checkbox"/><br/>             Rec/Store/Packaging <input type="checkbox"/><br/>             Supplier <input type="checkbox"/> </div> <div>             Engineering <input type="checkbox"/><br/>             Quality <input type="checkbox"/><br/>             Other <input type="checkbox"/> </div> </div> |                                                 |  |  |                       |  |
| Date :                                                       |                                                | Step #:                                                                                                                                                                            |                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | QTY Effective :                                 |  |  | MRB (QSI042) Approval |  |
| Description Work Order Deviation                             |                                                |                                                                                                                                                                                    |                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Disposition                                     |  |  |                       |  |
|                                                              |                                                |                                                                                                                                                                                    |                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Completed By                                    |  |  |                       |  |
|                                                              |                                                |                                                                                                                                                                                    |                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Lead hand / Supervisor<br>Approval Verification |  |  |                       |  |
|                                                              |                                                |                                                                                                                                                                                    |                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | QC / QA Coordinator<br>Approval                 |  |  |                       |  |
| Root Cause                                                   |                                                | FAULT CATEGORY                                                                                                                                                                     |                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                 |  |  |                       |  |
| Environment <input type="checkbox"/>                         | No Re-verification <input type="checkbox"/>    | Pressure/Forced <input type="checkbox"/>                                                                                                                                           | Temperature/Cure <input type="checkbox"/>                  | Power Loss/Surge <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Positioned Wrong <input type="checkbox"/>       |  |  |                       |  |
| Design <input type="checkbox"/>                              | Operator <input type="checkbox"/>              | Bending <input type="checkbox"/>                                                                                                                                                   | Set-up <input type="checkbox"/>                            | Folio/Program <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Outside Dimensions <input type="checkbox"/>     |  |  |                       |  |
| Doc/Data <input type="checkbox"/>                            | Offset/Setup <input type="checkbox"/>          | Centre Not Concentric <input type="checkbox"/>                                                                                                                                     | BOM/Route <input type="checkbox"/>                         | Grain <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Over/Under tolerance <input type="checkbox"/>   |  |  |                       |  |
| Equip/Tooling <input type="checkbox"/>                       | Supplier <input type="checkbox"/>              | Cracks <input type="checkbox"/>                                                                                                                                                    | Broken/Damage/Defect <input type="checkbox"/>              | Weld <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Part Incorrect <input type="checkbox"/>         |  |  |                       |  |
| Handling/Pre <input type="checkbox"/>                        | Training <input type="checkbox"/>              | Crimp/Kink/Ripple/Wave <input type="checkbox"/>                                                                                                                                    | Inspection Incomplete/Unqualified <input type="checkbox"/> | Wrong Stock Pulled <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Part Lost/Missing <input type="checkbox"/>      |  |  |                       |  |
| Material <input type="checkbox"/>                            | Use for Testing <input type="checkbox"/>       | Cuffs <input type="checkbox"/>                                                                                                                                                     | Contamination <input type="checkbox"/>                     | Out of Sequence <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Part Moved <input type="checkbox"/>             |  |  |                       |  |
| Internal Transport <input type="checkbox"/>                  | Poor Information <input type="checkbox"/>      | Crushing <input type="checkbox"/>                                                                                                                                                  | Countersink <input type="checkbox"/>                       | Off-set <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Drawing <input type="checkbox"/>                |  |  |                       |  |
| Tribal Knowledge <input type="checkbox"/>                    | Rushing <input type="checkbox"/>               | Heat Treat <input type="checkbox"/>                                                                                                                                                | Cut Too Short <input type="checkbox"/>                     | Mislabeled <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Finish <input type="checkbox"/>                 |  |  |                       |  |
| LOA <input type="checkbox"/>                                 | Product Improvement <input type="checkbox"/>   | Wave/Twist in Tube <input type="checkbox"/>                                                                                                                                        | Instructions Incomplete/Unclear <input type="checkbox"/>   | Fit/Function <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Misread <input type="checkbox"/>                |  |  |                       |  |
| Substation <input type="checkbox"/>                          | Process Improvement <input type="checkbox"/>   | Marks/Chatter <input type="checkbox"/>                                                                                                                                             | Drill Holes <input type="checkbox"/>                       | Misaligned/off center <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Turning Sequence <input type="checkbox"/>       |  |  |                       |  |
| Past Expiry Date <input type="checkbox"/>                    | Manufacturing Process <input type="checkbox"/> | OTHER :                                                                                                                                                                            |                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                 |  |  |                       |  |
| Misidentified <input type="checkbox"/>                       | Past Due <input type="checkbox"/>              |                                                                                                                                                                                    |                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                 |  |  |                       |  |

**Work Order ID 135063****\*135063\***

Page 2

July 27, 2015 3:53:20 PM

Item ID: D022-661-041

Accept

**\*N900040100\***Setup Start **\*NS1\***

Revision ID:

Stop **\*NS2\***

Item Name: R22 Bearpaw Wearplates

Start Date: 7/27/2015 Start Qty: 1.00

**\*1\***

Cust Item ID:

Required Date: 8/10/2015 Req'd Qty: 1.00

**\*1\***

Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start **\*NR1\***

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop **\*NR2\***

| Sequence ID/<br>Work Center ID | Operation<br>Description | Set Up/<br>Run Hours | Tool ID | Tool # | Plan<br>Code | Accept<br>Qty | Reject<br>Qty | Reject<br>Number | Insp.<br>Stamp |
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|

130

0.00

**\*130\***

Packaging

Packaging

Memo

0.00

Packaging

Identify and pack for shipping as per PPP D022-661-041/ DSI9717-041

Location: S12

AUG 11 2015

140

QC21- Final Inspection - Work Order Release

0.00

**\*140\***

QC

Memo

0.00

Quality Control

AUG 11 2015

MLSmrf

5-8-11

DQA: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only ☐

|                                                              |                                             |                                                                                                                                                                                    |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                           |                                 |                                   |                                              |                                 |                                        |                                             |                                   |                                       |                                                |                                    |                                |                                               |                                        |                                   |                                 |                                               |                               |                                         |                                       |                                   |                                                 |                                                            |                                             |                                            |                                   |                                          |                                |                                        |                                          |                                     |                                             |                                           |                                   |                                      |                                  |                                  |                                           |                                  |                                     |                                        |                                     |                                 |                              |                                              |                                             |                                                          |                                       |                                  |                                     |                                              |                                        |                                      |                                                |                                           |                                           |                                                |               |  |
|--------------------------------------------------------------|---------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|---------------------------------|-----------------------------------|----------------------------------------------|---------------------------------|----------------------------------------|---------------------------------------------|-----------------------------------|---------------------------------------|------------------------------------------------|------------------------------------|--------------------------------|-----------------------------------------------|----------------------------------------|-----------------------------------|---------------------------------|-----------------------------------------------|-------------------------------|-----------------------------------------|---------------------------------------|-----------------------------------|-------------------------------------------------|------------------------------------------------------------|---------------------------------------------|--------------------------------------------|-----------------------------------|------------------------------------------|--------------------------------|----------------------------------------|------------------------------------------|-------------------------------------|---------------------------------------------|-------------------------------------------|-----------------------------------|--------------------------------------|----------------------------------|----------------------------------|-------------------------------------------|----------------------------------|-------------------------------------|----------------------------------------|-------------------------------------|---------------------------------|------------------------------|----------------------------------------------|---------------------------------------------|----------------------------------------------------------|---------------------------------------|----------------------------------|-------------------------------------|----------------------------------------------|----------------------------------------|--------------------------------------|------------------------------------------------|-------------------------------------------|-------------------------------------------|------------------------------------------------|---------------|--|
| Work Order: _____<br><br>Part No. _____<br><br>NCR No. _____ |                                             | <b>DISPOSITION</b><br><br>Rework <input type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/><br>Suspected Unapproved <input type="checkbox"/> |                                           | <b>AGAINST DEPARTMENT/PROCESS</b><br><br><div style="display: flex; justify-content: space-between;"> <div>           Skid-tube <input type="checkbox"/><br/>           Machining <input type="checkbox"/><br/>           Thermoforming <input type="checkbox"/><br/>           Large Fab <input type="checkbox"/> </div> <div>           Cross tube <input type="checkbox"/><br/>           Small Fab <input type="checkbox"/><br/>           Finishing <input type="checkbox"/><br/>           Composite <input type="checkbox"/> </div> <div>           Water Jet <input type="checkbox"/><br/>           Prod. Eng. Coord. <input type="checkbox"/><br/>           Rec/Store/Packaging <input type="checkbox"/><br/>           Supplier <input type="checkbox"/> </div> <div>           Engineering <input type="checkbox"/><br/>           Quality <input type="checkbox"/><br/>           Other <input type="checkbox"/> </div> </div> |                                           |                                 |                                   |                                              |                                 |                                        |                                             |                                   |                                       |                                                |                                    |                                |                                               |                                        |                                   |                                 |                                               |                               |                                         |                                       |                                   |                                                 |                                                            |                                             |                                            |                                   |                                          |                                |                                        |                                          |                                     |                                             |                                           |                                   |                                      |                                  |                                  |                                           |                                  |                                     |                                        |                                     |                                 |                              |                                              |                                             |                                                          |                                       |                                  |                                     |                                              |                                        |                                      |                                                |                                           |                                           |                                                |               |  |
| Date :                                                       |                                             | Step #:                                                                                                                                                                            |                                           | QTY Effective :                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                           |                                 |                                   | MRB (QS1042) Approval                        |                                 |                                        |                                             |                                   |                                       |                                                |                                    |                                |                                               |                                        |                                   |                                 |                                               |                               |                                         |                                       |                                   |                                                 |                                                            |                                             |                                            |                                   |                                          |                                |                                        |                                          |                                     |                                             |                                           |                                   |                                      |                                  |                                  |                                           |                                  |                                     |                                        |                                     |                                 |                              |                                              |                                             |                                                          |                                       |                                  |                                     |                                              |                                        |                                      |                                                |                                           |                                           |                                                |               |  |
| Description Work Order Deviation                             |                                             |                                                                                                                                                                                    |                                           | Disposition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                           |                                 |                                   | Completed By                                 |                                 |                                        |                                             |                                   |                                       |                                                |                                    |                                |                                               |                                        |                                   |                                 |                                               |                               |                                         |                                       |                                   |                                                 |                                                            |                                             |                                            |                                   |                                          |                                |                                        |                                          |                                     |                                             |                                           |                                   |                                      |                                  |                                  |                                           |                                  |                                     |                                        |                                     |                                 |                              |                                              |                                             |                                                          |                                       |                                  |                                     |                                              |                                        |                                      |                                                |                                           |                                           |                                                |               |  |
|                                                              |                                             |                                                                                                                                                                                    |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                           |                                 |                                   | Lead hand / Supervisor Approval Verification |                                 |                                        |                                             |                                   |                                       |                                                |                                    |                                |                                               |                                        |                                   |                                 |                                               |                               |                                         |                                       |                                   |                                                 |                                                            |                                             |                                            |                                   |                                          |                                |                                        |                                          |                                     |                                             |                                           |                                   |                                      |                                  |                                  |                                           |                                  |                                     |                                        |                                     |                                 |                              |                                              |                                             |                                                          |                                       |                                  |                                     |                                              |                                        |                                      |                                                |                                           |                                           |                                                |               |  |
|                                                              |                                             |                                                                                                                                                                                    |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                           |                                 |                                   | QC / QA Coordinator Approval                 |                                 |                                        |                                             |                                   |                                       |                                                |                                    |                                |                                               |                                        |                                   |                                 |                                               |                               |                                         |                                       |                                   |                                                 |                                                            |                                             |                                            |                                   |                                          |                                |                                        |                                          |                                     |                                             |                                           |                                   |                                      |                                  |                                  |                                           |                                  |                                     |                                        |                                     |                                 |                              |                                              |                                             |                                                          |                                       |                                  |                                     |                                              |                                        |                                      |                                                |                                           |                                           |                                                |               |  |
|                                                              |                                             |                                                                                                                                                                                    |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                           |                                 |                                   |                                              |                                 |                                        |                                             |                                   |                                       |                                                |                                    |                                |                                               |                                        |                                   |                                 |                                               |                               |                                         |                                       |                                   |                                                 |                                                            |                                             |                                            |                                   |                                          |                                |                                        |                                          |                                     |                                             |                                           |                                   |                                      |                                  |                                  |                                           |                                  |                                     |                                        |                                     |                                 |                              |                                              |                                             |                                                          |                                       |                                  |                                     |                                              |                                        |                                      |                                                |                                           |                                           |                                                |               |  |
| Root Cause                                                   |                                             | FAULT CATEGORY                                                                                                                                                                     |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                           |                                 |                                   |                                              |                                 |                                        |                                             |                                   |                                       |                                                |                                    |                                |                                               |                                        |                                   |                                 |                                               |                               |                                         |                                       |                                   |                                                 |                                                            |                                             |                                            |                                   |                                          |                                |                                        |                                          |                                     |                                             |                                           |                                   |                                      |                                  |                                  |                                           |                                  |                                     |                                        |                                     |                                 |                              |                                              |                                             |                                                          |                                       |                                  |                                     |                                              |                                        |                                      |                                                |                                           |                                           |                                                |               |  |
| Environment <input type="checkbox"/>                         | No Re-verification <input type="checkbox"/> | Pressure/Forced <input type="checkbox"/>                                                                                                                                           | Temperature/Cure <input type="checkbox"/> | Power Loss/Surge <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Positioned Wrong <input type="checkbox"/> | Design <input type="checkbox"/> | Operator <input type="checkbox"/> | Bending <input type="checkbox"/>             | Set-up <input type="checkbox"/> | Folio/Program <input type="checkbox"/> | Outside Dimensions <input type="checkbox"/> | Doc/Data <input type="checkbox"/> | Offset/Setup <input type="checkbox"/> | Centre Not Concentric <input type="checkbox"/> | BOM/Route <input type="checkbox"/> | Grain <input type="checkbox"/> | Over/Under tolerance <input type="checkbox"/> | Equip/Tooling <input type="checkbox"/> | Supplier <input type="checkbox"/> | Cracks <input type="checkbox"/> | Broken/Damage/Defect <input type="checkbox"/> | Weld <input type="checkbox"/> | Part Incorrect <input type="checkbox"/> | Handling/Pre <input type="checkbox"/> | Training <input type="checkbox"/> | Crimp/Kink/Ripple/Wave <input type="checkbox"/> | Inspection Incomplete/Unqualified <input type="checkbox"/> | Wrong Stock Pulled <input type="checkbox"/> | Part Lost/Missing <input type="checkbox"/> | Material <input type="checkbox"/> | Use for Testing <input type="checkbox"/> | Cuffs <input type="checkbox"/> | Contamination <input type="checkbox"/> | Out of Sequence <input type="checkbox"/> | Part Moved <input type="checkbox"/> | Internal Transport <input type="checkbox"/> | Poor Information <input type="checkbox"/> | Crushing <input type="checkbox"/> | Countersink <input type="checkbox"/> | Off-set <input type="checkbox"/> | Drawing <input type="checkbox"/> | Tribal Knowledge <input type="checkbox"/> | Rushing <input type="checkbox"/> | Heat Treat <input type="checkbox"/> | Cut Too Short <input type="checkbox"/> | Mislabeled <input type="checkbox"/> | Finish <input type="checkbox"/> | LOA <input type="checkbox"/> | Product Improvement <input type="checkbox"/> | Wave/Twist in Tube <input type="checkbox"/> | Instructions Incomplete/Unclear <input type="checkbox"/> | Fit/Function <input type="checkbox"/> | Misread <input type="checkbox"/> | Substation <input type="checkbox"/> | Process Improvement <input type="checkbox"/> | Marks/Chatter <input type="checkbox"/> | Drill Holes <input type="checkbox"/> | Misaligned/off center <input type="checkbox"/> | Turning Sequence <input type="checkbox"/> | Past Expiry Date <input type="checkbox"/> | Manufacturing Process <input type="checkbox"/> | OTHER : _____ |  |
| Misidentified <input type="checkbox"/>                       | Past Due <input type="checkbox"/>           |                                                                                                                                                                                    |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                           |                                 |                                   |                                              |                                 |                                        |                                             |                                   |                                       |                                                |                                    |                                |                                               |                                        |                                   |                                 |                                               |                               |                                         |                                       |                                   |                                                 |                                                            |                                             |                                            |                                   |                                          |                                |                                        |                                          |                                     |                                             |                                           |                                   |                                      |                                  |                                  |                                           |                                  |                                     |                                        |                                     |                                 |                              |                                              |                                             |                                                          |                                       |                                  |                                     |                                              |                                        |                                      |                                                |                                           |                                           |                                                |               |  |

# Picklist Print

July 27, 2015 3:53:29 PM

Page 1

Work Order ID: 135063

\*135063\*

Parent Item: D022-661-041

\*D022-661-041\*

Parent Item Name: R22 Bearpaw Wearplates

Start Date: 7/27/2015

Required Date: 8/10/2015

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev:A 15.02.24 NEW ISSUE DD verf:JLM

| Component Item ID/<br>Item Name | Replacement<br>Item ID | Mfg/<br>Purch | Bin<br>Item | Primary<br>Location | Last<br>Location | Route<br>Seq ID | Unit of<br>Measure | Qty on<br>Hand | Qty per Kit | Total<br>Qty | Qty<br>Issued | Date<br>Issued | Status |
|---------------------------------|------------------------|---------------|-------------|---------------------|------------------|-----------------|--------------------|----------------|-------------|--------------|---------------|----------------|--------|
| AN4-14A                         |                        | Purchased     | No          |                     |                  |                 | Each               | 356.0000       |             | 4            |               |                |        |
| *AN4-14A*                       |                        |               |             |                     |                  |                 |                    |                | **          | JA           |               | JUL 28 2015    |        |

Bolt

DAS  
02  
9-89

## Location

## Loc Qty

## Loc Code

FG

5

122141

5

ST325A

304

M128769

4

M132640

200

M132677

100

ST344

47

M132317

47

D5222-041

Manufactured No

Each

0.0000

\*D5222-041\* \*

Wearplate Assembly

B135048

\*\*

2

AUG 07 2015

2

DAS  
02  
9-89

DAS  
28  
9-89

DAS  
28  
9-89

# Picklist Print

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Page 2

Work Order ID: 135063

\*135063\*

Parent Item: D022-661-041

\*D022-661-041\*

Parent Item Name: R22 Bearpaw Wearplates

Start Date: 7/27/2015

Required Date: 8/10/2015

Start Qty: 1.00

Required Qty: 1.00

MS21042L4

Purchased

No

Each

3,376.000

4

\*MS21042I 4\*

\*\*

JA

JUL 28 2015

Locknut

DAS  
02  
9-89

Location

Loc Qty

Loc Code

FP001

2

m124231

2

GA

142

m127813

142

ST260a

170

m130799

56

m131803

6

m132262

108

ST305

3062

m128300

8

m128798

12

m130388

7

m130922

97

m131618

12

m132123

56

m132382

2870

4

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Shop Packet Print

Page 2

# Picklist Print

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Page 3

Work Order ID: 135063

**\*135063\***

Parent Item: D022-661-041

**\*D022-661-041\***

Parent Item Name: R22 Bearpaw Wearplates

Start Date: 7/27/2015

Required Date: 8/10/2015

Start Qty: 1.00

Required Qty: 1.00

NAS1149D0463J

Purchased

No

Each

3,622.000

4

**\*NAS1149D0463.J\***

WASHER

\*\*

JA

JUL 28 2015

DAS  
28  
9-89

**DAS  
02  
9-89**

Location

Loc Qty

Loc Code

GA

41

M129390

41

ST260a

1000

M132677

1000

ST269

2581

M127904

20

M129682

86

M130799

371

M132035

1979

M132317

125

4

July 27, 2015 3:53:29 PM

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**DART SERVICE INSTRUCTION**  
TO AMEND INSTALLATION INSTRUCTIONS IIN-D022-661 REV. B AND  
INSTRUCTIONS FOR CONTINUED AIRWORTHINESS ICA-D022-661 REV. 0  
OR LATER APPROVED REVISION  
REF. TCCA STC: SH02-9  
REF. FAA STC: SR01493NY

**1.0 Purpose**

The purpose of this Dart Service Instruction (DSI) is to provide instructions to install the D022-661-041 Wearplate Kit as part of the D022-661-011 Bearpaw Kit in order to provide additional protection for the bearpaw and better grip on slippery surfaces.

**2.0 Installation**

- 2.1. Lift the skidtube per the Aircraft Maintenance Manual. Ensure the skid tubes are serviceable. Remove the forward set of bolts on the D022-661-011 Bearpaws per ICA-D022-661 and retain hardware. Bearpaws may be removed at customer's option.
- 2.2. Locate a D5222-041 Wearplate on the bottom side of each D3076-1 Bearpaw per Figure 1.
- 2.3. Ensure the D3076-1 Bearpaw and D5222-041 Wearplate are positioned on the aft end of each skidtube as shown in Figure 2.
- 2.4. Lower the aircraft so the aircraft is resting on the bearpaws.
- 2.5. Attach the D2870 Clamp with the hardware shown in Figure 3  
**CAUTION: The torque on the nuts should be limited to 20 in-lb (2.3 Nm).**

NOTE: Additional NAS1149D0463J washers may be installed under the nuts to ensure 1.5-4 threads in safety on the bolts. Although not generally necessary, it is acceptable to replace the AN4 bolts with longer or shorter AN4 bolts if required.

- 2.6. Update aircraft log book to indicate installation of D022-661-041 Wearplate kit and adjust weight and balance record of the aircraft with the weight and balance data provided in Section 3 of this DSI.

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DEPARTMENT OF TRANSPORT  
AIRCRAFT CERTIFICATION  
BRANCH  
DAO # 01-O-01

APPROVED

BY:   
D. SHEPHERD (DE # 02)

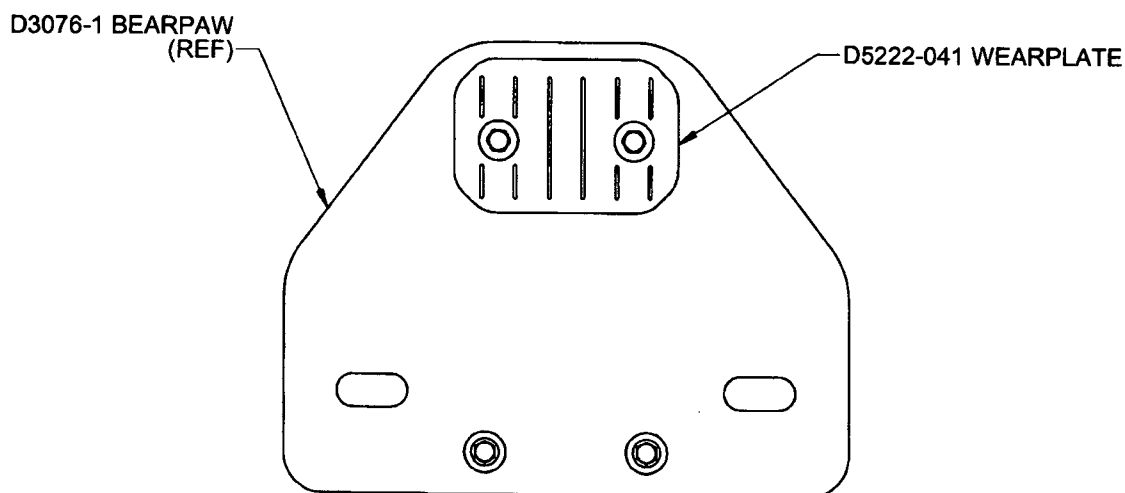
DATE: 15.02.04  
CERT. NO.: SH02-9  
ISSUE NO.: 1

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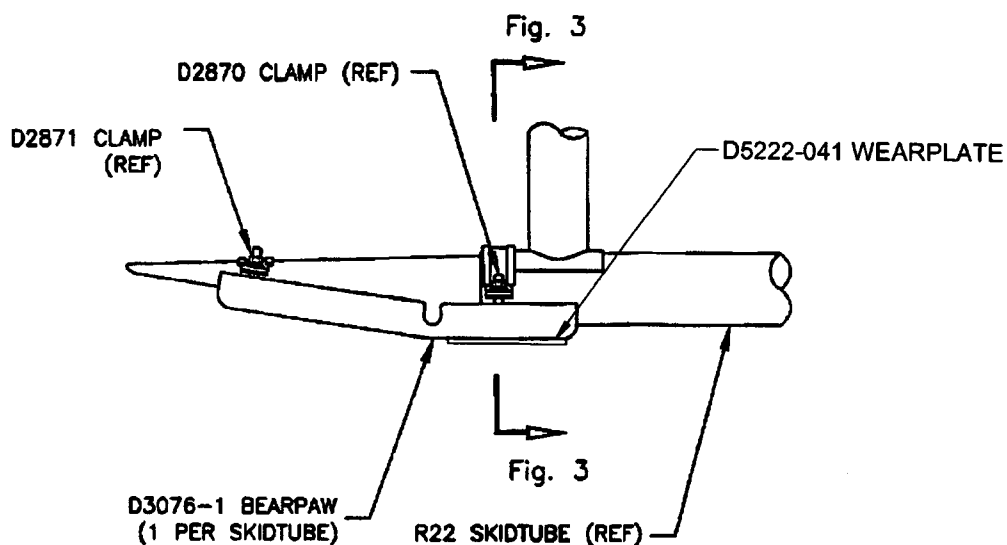
SH 20150727

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|------------|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| A          | NEW ISSUE                                                                           | VS                                                                                                                                                                                                                                                                                       | 15.02.04     |
| REV.       | DESCRIPTION                                                                         | BY                                                                                                                                                                                                                                                                                       | DATE         |
| DESIGN     | VS                                                                                  | <b>DART AEROSPACE LTD</b><br>HAWKESBURY, ONTARIO, CANADA                                                                                                                                                                                                                                 |              |
| DRAWN      | VS                                                                                  |                                                                                                                                                                                                                                                                                          |              |
| CHECKED    | RF                                                                                  | DRAWING NO.                                                                                                                                                                                                                                                                              | REV. A       |
| MFG. APPR. | N/A                                                                                 | DSI 9717                                                                                                                                                                                                                                                                                 | SHEET 1 OF 4 |
| APPROVED   | HS                                                                                  | TITLE                                                                                                                                                                                                                                                                                    | SCALE        |
| DE APPR.   |  | WEARPLATE INSTALLATION                                                                                                                                                                                                                                                                   | NTS          |
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**Figure 1 - Installation of D5222-041 Wearplate on D3076-1 Bearpaw**  
(View from under bearpaw)



**Figure 2 - Bearpaw Location**  
(Side View)

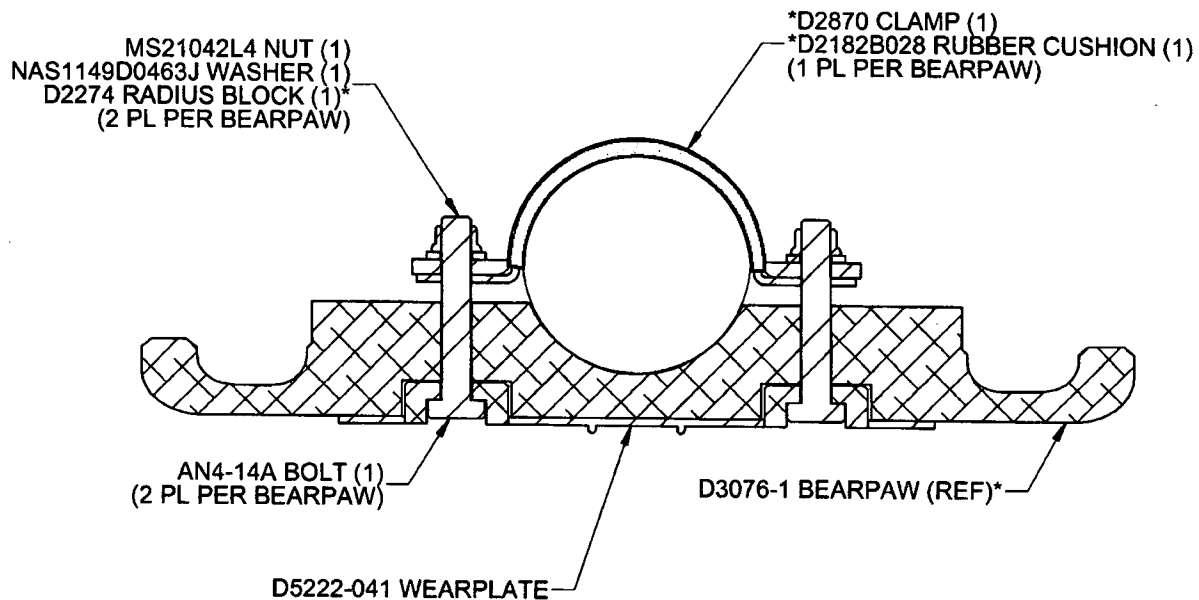
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| MFG. APPR. | N/A                | <b>DSI 9717</b>                                                                                                                                                                                                                                                                                   | SHEET 2 OF 4 |
| APPROVED   | HS                 | TITLE                                                                                                                                                                                                                                                                                             | SCALE        |
| DE APPR.   | <i>[Signature]</i> | <b>WEARPLATE INSTALLATION</b>                                                                                                                                                                                                                                                                     | NTS          |
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**Figure 3 - Bearpaw Installation**  
(Forward Clamp)

\*Included in D022-661-011

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| MFG. APPR. | N/A                                                                                 |                                                                                                                                                                                                                                                                                 | SHEET 3 OF 4 |
| APPROVED   | HS                                                                                  | TITLE                                                                                                                                                                                                                                                                           | SCALE        |
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### 3.0 Weight and Balance

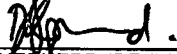
| Installation                  | Weight             | LATERAL         |                       | LONGITUDINAL       |                         |
|-------------------------------|--------------------|-----------------|-----------------------|--------------------|-------------------------|
|                               |                    | Arm             | Moment                | Arm                | Moment                  |
| D022-661-041<br>Wearplate kit | 0.84 lb<br>0.38 kg | 0.0 in<br>0.0 m | 0.0 lb-kg<br>0.0 m-kg | 118.3 in<br>3.00 m | 99.4 in-lb<br>1.14 m-kg |

### 4.0 Parts List

| QTY<br>-041 | Part Number   | Description   |
|-------------|---------------|---------------|
| X           | D022-661-041  | WEARPLATE KIT |
| 2           | D5222-041     | WEARPLATE     |
| 4           | AN4-14A       | BOLT          |
| 4           | MS21042L4     | NUT           |
| 4           | NAS1149D0436J | WASHER        |

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| MFG. APPR. | N/A                                                                                 | DSI 9717 SHEET 4 OF 4                                                                                                                                                                                                                                                           |
| APPROVED   | HS                                                                                  | TITLE SCALE                                                                                                                                                                                                                                                                     |
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## 3.0 Weight and Balance

| Installation                  | Weight             | LATERAL         |                       | LONGITUDINAL       |                         |
|-------------------------------|--------------------|-----------------|-----------------------|--------------------|-------------------------|
|                               |                    | Arm             | Moment                | Arm                | Moment                  |
| D022-661-041<br>Wearplate kit | 0.84 lb<br>0.38 kg | 0.0 in<br>0.0 m | 0.0 lb-kg<br>0.0 m-kg | 118.3 in<br>3.00 m | 99.4 in-lb<br>1.14 m-kg |

## 4.0 Parts List

| QTY<br>-041 | Part Number   | Description   |
|-------------|---------------|---------------|
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| 4           | AN4-14A       | BOLT          |
| 4           | MS21042L4     | NUT           |
| 4           | NAS1149D0436J | WASHER        |

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| DRAWN      | VS                                                                                  |                                                                                                                                                                                                                                                                                                   |
| CHECKED    | RF                                                                                  | DRAWING NO. <b>DSI 9717</b>                                                                                                                                                                                                                                                                       |
| MFG. APPR. | N/A                                                                                 | REV. A<br>SHEET 4 OF 4                                                                                                                                                                                                                                                                            |
| APPROVED   | HS                                                                                  | TITLE <b>WEARPLATE INSTALLATION</b>                                                                                                                                                                                                                                                               |
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